GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Agriculture Department - Seeds - Review of the Seed Supply Channel(s) to Farmers of the State- Regulation of Seed Nurseries- Operational Guidelines for maintenance and verification of Research & Development (R&D) in Seeds – Approved- Orders – Issued.

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AGRICULTURE & COOPERATION (AGRI.II) DEPARTMENT

G.O.MS.No. 19 Dated: 10-03-2017

Read:

From the Director of Agriculture, A.P., Guntur, letter No.SRC(2)123/2016, dated:14.02.2017.

ORDER:

With the onset of Green revolution, there have been considerable changes in the pattern of seed usage i.e., use of preference for hybrid seeds in many crops in lieu of varietal seed of conventional type. During further course of time, several seed producers have brought out various types of hybrids in majority of crops including genetically modified seed. Since farmers are adopting hybrid seeds and other seeds, it is now required for the farmers to purchase seed for every season from the seed producers as against the conventional system of producing the seed by the farmer for their requirement. A quantum increase in production can be affected only by enhancing seed replacement RATE (SRr) of various crops. This will require a vastly expanded role of the Pvt. Seed industry as well. Eventually several problems concerned to physical purity, genetic purity and some other defects relating to quality of seed have been cropping up from time to time every year. Many a time farmers have been expressing their grievance and seeking the help from Government to fix the responsibility on the concerned seed producer for supply of defective/substandard seed.

2. Several times, farmers' organizations have been ventilating the said issues before the Government for redressal. The menace of supply of spurious defective seeds has been playing loose with the farmers and consequently the farmers who are in distress are put to serious suffering and losses. In this context the Seeds Men Association has also represented the Director of Agriculture, AP, Guntur to initiate necessary action and to stream line the procedures for production, distribution and sale of quality seeds through reviewing of seed supply channels to farmers of the state.

3. The Director of Agriculture has taken initiative and organized a series of meetings with Seeds Men Association, Director of Research, ANGRAU, Director of Research, YSRHU and concerned scientists, farmer representatives and their inputs and Dept officials to stream line the existing R&D guide lines and monitoring & verification mechanism of Research & development in seeds. After series of consultations and discussions held with the stake holders, it has been considered necessary to formulate detailed operational guidelines for conducting R&D, Multiplication, GOT, distribution of seeds and verification of R&D farms by the R&D committee.

4. The Director of Agriculture, A.P, Guntur has represented to Govt. that several field complaints on poor performance/ crop failures of the seed supplied by the seed companies/Government agencies are being received from farmers across the state and requested the Govt. to evolve a suitable mechanism for the purpose of addressing the farmers complaints and to provide for regulating the quality of seeds for sale, import and export and to facilitate production and supply of seeds of quality and for matters connected there with or incidental there to.

5. Government after careful consideration of the issue and in exercise of powers conferred under the section 3 of E.C Act 1955 and in conjunction with the Seed Act, 1966 and the Seed (Control) Order, 1983 Government hereby formulate the Operational Guidelines for maintenance and verification of Research & Development (R&D) in Seeds duly involving all the stakeholders to execute the same.

/P.t.o/

6. The following Notification shall be published in the next issue of Andhra Pradesh State Extra-Ordinary Gazette.

## NOTIFICATION

### OPERATIONAL GUIDELINES FOR MAINTENANCE AND VERIFICATION OF RESEARCH & DEVELOPMENT (R&D) IN SEEDS

**BREEDERS & CONSULTANTS APPOINTMENT & QUALIFICATION**

- The companies should engage regular Breeders to monitor R&D farms and the same should be maintained as per the norms with minimum germplasm repository of respective crops.
- Each company should engage one Plant breeder with M.Sc. Ag (Genetics &Plant Breeding) qualification or B.Sc. (Ag) having 5 years of experience in Research & Seed production (or) M.Sc. (Ag) with two years experience in Research &seed production invariably ON ROLLS.
- A company can appoint /Utilize the services of consultants. The consultant breeder should not be more than 70 years. Any consultant Breeder should not work for more than 3 companies.
- A company owner with qualification of B.sc.(Ag)or M.Sc.(Ag.) could not be considered as the Breeder of the company.

**GUIDELINES FOR R&D UNITS MAINTENANCE AND VERIFICATION**

- Farm address (to be included in CSL)
- Farm facilities for research and Grow Out
- Post harvest facilities for processing
- Verification of maintenance of records
- Inspection of evaluation trials.
- Varieties/ Hybrids to be included.
- Staff deployed for Breeding, seed production, seed processing and seed testing & analysis
- Information on source of germplasm, collection and maintenance of germplasm should be made available at R&D field .
- Facilities for seed research, multiplication, GOT and seed testing facilities.
- Minimum R&D farm size is 5 acres. The proposed company should have own research farm or 5 years lease agreement but not on temporary leased fields with minimum irrigation facilities.
- It should be made mandatory to show the laboratory facilities at R&D field or an agreement for custom hiring services.
- All the R&D committee members should visit the field at a time, further the committee should visit and inspect private seed companies R&D farm at different stages of crop growth pertaining to the yield trials of test entries.
- Seed Inspectors in their jurisdiction is responsible for effective monitoring of Seed Production
- The R&D committee should visit the field as a team and should submit report along with photos, videos and geo-tagging with co-ordinates.

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- The Private Seed Company R & D farm which proposes the test entries for testing in the State Agricultural Universities should invariably be tested in their R&D farm for at least 2 years. The supporting data of the test entries should be submitted to the University for testing the entries in SAUs.

- The proposed test entries for the trial marketing by the company should invariably be tested in State Agricultural Universities where proposed for Trial marketing.

- The entries proposed for approval for trial marketing, the firm should submit the complete morphological, physiological, quantitative, qualitative characters, adaptability, agronomic performance for yield besides and reaction to pests and diseases as well as DUS characters of the test entry.

- The “Grow Out Tests” for determining the Genetic purity of the Variety/Hybrid based on distinguishable morphological characters should be made mandatory and the company should submit represented seed samples from all the lots meant for marketing to the Department of Agricultural for conduction of the GOT.

- The company should invariably submit DNA finger printing/ genetic bar code of the Variety/ F1 Hybrid along with parental lines for the bonafides of its identity and its genetic purity which should be complemented with field diagnostic report.

- Multi location data is also required for state/zonal wise recommendations. The varieties developed by the seed companies may be included in National Co- ordinate trials and minikits through the Department of Agriculture.

- The company which proposes to include the variety/hybrid in their CSL should have either DSIR certificate or State R&D committee approval.

- Existing procedure is acceptable for all the companies. It should be continued and paid-up trial with University is mandatory to know the performance of the proposed entries.

- The variety/hybrid proposed for trial marketing should invariably be tested in respective SAUs (ANGRAU, Dr YSR HORT.UNIV.) in the representing state where proposed for the trial marketing.

- The proposed entry for testing in SAUs should be tested in their R&D farm at least for 2 years.

- When the entry is approved for trial marketing, the firm should submit the complete morphological, agronomic, physiological, Yield attributes, adaptability, and expected performance besides DUS characters.

**GROW OUT TESTS (GOT ) :**

- GOT tests should be conducted by all the companies. The Department has decided to go for 5-10% random sampling and GOT tests were conducted in Departmental Laboratories and Departmental Seed farms for quality check & Genetic Purity.

- The firms have to maintain two guard samples for GOT, One for Dept. for verification whenever necessary and another to keep with the firm itself.

**SEED PRODUCTION & MARKET PLAN IN ONLINE**

- Particulars of seed production of a company be made available in online. The company should declare the quantity of seeds available for sale under each variety at the commencement of season itself and a declaration to that effect be provided to the Department of Agriculture along with descriptive blank of the varietal characters.

- Instructed that the details of quantities, lot numbers, dealers / retailers or marketing agencies should be made available on-line and to be updated as the sales commence.

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**CO – MARKETING**

- The existing procedure of issuing co-marketing permission will be continued. Time lines for submission of applications, processing and issuing permissions are finalized.

  Cut off Dates : Receipt of application : 28th Feb.

  According permission : 31st Mar.

- The validity of co-marketing permission should be coterminous with the validity of CSL of producer or validity of agreement or whichever is earlier.

- The producer cum Marketer as well as co-marketer should submit a guard sample of co-mktg. variety/hybrid , to ascertain the quality and Genetic purity of the hybrid and to overcome the problems in future such as mismatch or else marketing of Hybrids other than the hybrid permitted in the CSL.

- **YIELD EVALUATION TRIALS**

**(A) OBSERVATION YIELD TRIAL.**

| S.No | Parameter | Hybrids | Varieties |
|---|---|---|---|
| 1. | Rows per entry/Row length | 2 rows of 6m length | 2 rows of 6m length |
| 2. | Replications | 3 | 3 |
| 3. | Design | RBD | RBD |
| 4. | Check(Local , popular and commercial / standard checks ) | 3 | 3 |
| 5. | Spacing(Crop specific) | As recommended | As recommended |

**(B) PRELIMINARY YIELD TRIAL**

| S No. | Parameter | Hybrids | Varieties |
|---|---|---|---|
| 1. | Rows per entry | 4 rows of 6m length | 4 rows of 6m length |
| 2. | Replications | 3 | 3 |
| 3. | Design | RBD | RBD |
| 4. | Check(Local , popular and commercial / standard checks ) | 3 | 3 |
| 5. | Spacing(Crop specific) | As recommended | As recommended |

**(C) Advanced yield trial**

| SNo | Parameter | Hybrids | Varieties |
|---|---|---|---|
| 1. | Rows per entry | 6-8 rows of 6m length | 6-8 rows of 6m length |
| 2. | Replications | 3 | 3 |
| 3. | Design | RBD | RBD |
| 4. | Check(Local , popular and commercial / standard checks ) | 3 | 3 |
| 5. | Spacing(Crop specific) | As recommended | As recommended |

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**Maintenance of Basic records**

1)Germplasm Register ( Details on collection, evaluation, characterization, maintenance and its utilization).
2)Crossing Register
3)Pedigree Register
4)Nursery Register
5)Yield trial Register

(Performance of all the test entries which are being evaluated in different trials starting from a) Observation yield trials b) Preliminary yield trials c) Advanced yield trials conducted as per the trials specifications of crops).

**MAINTENANCE OF RECORDS AND SUBMISSION OF RETURNS**

**A. Production**

- Source of foundation seed
- Agreement with seed production farmers
- Issue of foundation seed slips
- Field inspection as in case of certified seed
- Movement of seed from field to processing plant/ Transfer Certificates
- Delivery challans

**B. PROCESSING PLANT**

- Seed Processing registers (Basic register )-I.
- Seed Stock register –II

**C. SUBMISSION OF RETURNS**

- All the seed producers should submit
- Form D (Monthly return) by 5$^{th}$ of every month.
- Seed production programme - beginning of every year.
- Market plan ( District wise , variety wise )–beginning of every year
- Any other records, returns , books or accounts to be maintained or to be submitted as directed by the State Government.
- Seed production particulars / reports / monthly returns should be submitted to the seed inspectors of concerned jurisdiction.

7. The Director of Agriculture, A.P., Guntur shall take necessary action in the matter accordingly.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

B.RAJSEKHAR
SPECIAL CHIEF SECRETARY TO GOVERNMENT (AGRI) (FAC)

To
The Commissioner of Printing & Stationery (Printing Wing), Vijayawada,
with a request to publish the Notification in the Andhra Pradesh State Extra-Ordinary Gazette and supply 50 copies to this Department and 200 copies to the Director of Agriculture, A.P., Guntur.
The Director of Agriculture, A.P., Guntur.
Copy to:
The Commissioner, Horticulture,
Old Mirchi Yard, Chuttugunta, Guntur.
The Registrar, ANGRAU,
Vijaya Durga Towers, Mahatma Gandhi Inner Road,
Guntur.
The P.S. to Minister (Agri.)
The P.S. to Spl. Chief Secretary (Agri.).
Sf/Sc.

//FORWARDED::BY ORDER//

SECTION OFFICER